Recd Jan 20th
Ans. Febr. 5th

1845
" Jan 4th
" 20
" Febr 5

A Gray
Cambridge

Cambridge. 4th Jany. 1845 —

Dear Doctor

Your favor of the 6th Decr — duly reached me — and the parcel of plants and seeds came the very same day! I have notified Hooker of the enclosed parcel of seeds for him, and shall forward it by the next steamer.

If Lindheimer will only send his other collection we can go on. His interests would be best secured by not distributing so small a set as those now in my hands. — it is so difficult to collect small sums, — and so many of the plants in ~~th~~ the former package are common both at the north and South. — and so large a part of those that are not common were in Drummond's set. Why has he not done much more the last two years? I hope the sets you are expecting will swell the list to a goodly number.

I hope he will soon be collecting in Western Texas. — and collect largely.

You can, if you choose, commence the distribution of sets by numbers, a little in advance of publication.

I had already arranged a pretty good figure of Cuscuta Gronovii from Choisy.

Dr. Torrey has just been making me a flying visit. We looked over your parcel together, and I gave him one specimen, as you directed, of the very striking and curious Asclepias Lindheimeri.

Vol IX of DC. Prodr. is not yet published, by the last accounts.

I can have some sets of Geyer's plants sent to Putnam at London — and apprise Hooker of it.

I am very busy, as you may well imagine; but soon after the parcel from Lindheimer reaches me I shall strive to do justice to it.

~~I ha~~
I am sorry that Geyer has proved so dishonest. —

Yours very cordially

A Gray

Recd Febr 17th
Ans Febr 20th
March 5th

Monday 3rd February. 1845

My Dear Doctor

Your letter of the 12th January reached me a little more than a week since. The parcels by Kinn, arrived on Thursday last, and on Saturday, I sent the seeds with the parcel before sent me — to Hooker by the steamer.

I am glad indeed to hear that Lindheimer is going farther into the interior — where I trust many of his plants will have no Latin name till we christen them. You must have received my last letter soon after you despatched yours.

I really think that Lindheimer's interest is best subserved by our keeping back the sets until the number becomes considerable (I wonder he has not collected more up to this time), and there is more and more of singular and new genera. A few new Genera will carry off a good many common plants. — and there are so many plants on sale, that only good, very good collections take well. As he gets more and more in the interior the species will be fewer like Drummond's, and like those of the Southern United States generally

At the same time the necessity of having reasonable returns must be looked at. I was looking at what was best in the long run.

When I set my self fairly at it, it will not take long to prepare the account for publication. —You prepare the numbers so that there is not any confusion on that score. I wish that the account should do us credit as botanists— and you know how many points I shall have to investigate— how many books & to consult. Mr Bentham has lately been making some Crotonaceous genera from California— and has referred some Texan species to them. I must look after these, &c &c &c (I cultivated the Euphorbia bicolor in the garden last season, I really fear it is only a var. of E. marginata.). Well you can get the numbers arranged, and the sets distributed, those to go abroad the greatest number— you will hardly get to New York before March. perhaps before April. My hands are full as possible till April 1.— Then, if life and health continue, I will take them up,— will prepare the account, and will have it printed by the 1st of May for the

July no. of Silliman. But I will have our extra copies — by special arrangement (and with a particular title page "Plantæ Lindheimerianæ &c.") delivered to me on the first of May, or thereabouts, and distributed, so that they will follow the sets, by the next steamer nearly. — So that there will not be the slightest danger of any one taking them up before us. — As Lindheimer goes on, and gets plants more unlike Drummond's, you will have subscribers from those generally who have had Drummond's. In this first distribution I would suggest that, if the whole number was to come out some fraction of hundreds — say ~~450, or~~ 430, to [illegible] except the odd numbers — and count them at 400, since there are so many that are common U. S. plants. — I think it would be for Lindheimer's pecuniary interest: but as you think best.

If we succeed in raising some money for our Garden this winter — as I have some hopes, I shall be very glad to offer a small pension to Lindheimer for seeds. If not, though I should like to do something, I must probably do it from my own pocket. The pulp of Algarobia — is no doubt, as you say, derived from the very parenchyma of the carpel.

I am glad you have had Geyer's plants sent to Hooker. I have taken two sets of them. I doubt if W. J.P. have sold any other.

Lindheimer ought to collect very largely where he now is — and send you many thousands of specimens by August next. I assure you I will despatch the account of his first coll. in April.

when he gets well agoing, he will do better.
Sullivant of Columbus is a subscriber, is he not?
You can send a set directly to him. If Lindheimer
will collect Mosses for him he will pay
him handsomely.

I remain
very truly Yours
A. Gray

1845
Febr 3d — A. Gray
" 17th
" 20th
March 5th
Cambridge

25

Dr George Engelmann
St. Louis
Missouri

44

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MISSOURI BOTANICAL GARDEN

Recd. April 12

Ansd May 13th

Cambridge March 22d 1845.

My Dear Sir

Yours of Feb 22. & March 6. duly reached me.

(of Boston)

B. D. Greene Esq. gives me his name as a subscriber to Lindheimer's Collections (though he has Drummond's); and I write this hurried note principally to say that I wish you to send a set for him as soon as you can safely & without very great expense. You can send it to me; and I will ~~use~~ follow ~~[illegible]~~ numbering in the arrangement for publication, as I think various alterations have been made in that. Will the nos. in the sets now correspond with that in your present letters?

You see something of the amount of labor that situated as I am, I am obliged to take. For instance in Acanthaceæ. Torrey & myself have been recording observations, notes &c.— on the American species, and waiting until we could make a good & thorough study altogether to decide upon what we should consider good genera—&c.— So of other families. This labor I must now do in anticipation. I shall keep the published account down within moderate bounds—rather condensed, that we may get it all in the forthcoming number (May) of Silliman

1845 March 22d A. Gray

Cambridge

April 12th

May 13th

If I succeed in raising Brazoria and other new genera, I shall have drawings made — and I hope I shall be able to publish plates in the autumn, — a sort of Plantae Rariores Bot. Hort. Cantab.

I shall now soon be able to take up the plants for study.

The new Post-office law will be a grand thing for us.

Dr. Wyman, a fine comparative anatomist wished to go with Fremont, and Abert would have appointed him. But Fremont would take instead a Dr. McDowell of Virginia, who I suppose knows nothing. Torrey urged him to take a botanical collector or botanist. He would not!

Yours truly

A. Gray

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BOTANICAL
GARDEN

ecd May 28th
Ans, June 11th

Cambridge 17th May. 1840.

My Dear Doctor.

I have been interrupted in my study of Pl. Lindheimerianae by the arrival of 6 cases of plants & trees from England, and the cares consequent upon a severe drought, which now, thank God, is over. I will now go on with them.

Your box reached me a week ago. I shall save most of the Cacti. — The inclosed for Hooker went in the steamer yesterday. I suppose it was for him, as it was not marked. — I did not open it.

I had noticed your mistake about Tragia (your now Trago-croton) It is the Aphora, Nutt. fl. Arkans. Terr. (Amer Phil. Soc.)

If Silliman begrudges the room which our paper will occupy (and I must keep down the notes brief as may be, — perhaps I shall print in the Jour. Nat. Hist. Soc. here — which is open to us. — In any case it will be in print next month, and will have plenty of copies for wide distribution. In Nat. Hist. Soc. we can have some plates if we wish hereafter. —

The 9th vol. of DC. has come. Your copy is sent by W. & P. through E. & J. Poppe. I have told W. & P. to send your Geyer collections to London, and to apprise me when sent that I may notify Hooker.

Many of the Texan seeds are up. among them Palafoxia Hookeriana — which will be very showy in cultivation, and which I shall perhaps figure. —

Oakes has written you, I trust, ere this for a set of Lindheimer plants — he told me he would.

Next winter I hope to be able to offer Lindheimer something for collecting seeds,) ~~plants~~ (and shrubs) for our Garden. I write in haste — to let you know I am

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nothing. ~~He~~ will now go ahead. Lindheimer ought to make admirable collections ~~and~~ this summer. It is very desirable he should.

I send a few notes I had made as I passed on —

Thanks for the printed tickets! Hastily

Yours truly

A. Gray

Obs. — Pl. Lindheimerianae —

No. 1. R. Texensis Engelm.
2 " trachycarpus ?. — the name is preoccupied by Fischer.
I change it to R. trachyspermus.
3. B. angustifolius & V.? (an spec.) Lindheimeri. — characters all copied as you give them
3 (bis) = Clematis Pitcheri, Torr. & Gr.
4 C. cylindrica var.
5. C. reticulata — — and so on —
no. 9. "Cristatella Jamesii" = C. erosa.
24. Sida Lindheimeri, n. sp. good. (S. heterocarpa I pass by till you send it.)
35. Psoralea —
[illegible]. Desmanthus? thrown in with Acacia (Neptunia) lutea is that plant in fruit, no doubt."
52. "Lythrum foliosum" = L. lanceolatum Ell. I have seen every sort of intermediate form between it and L. alatum!
55. Œ. rhombipetala ; (Œ. bifrons as figd. has rounded petals.
58. L. intermedia. I can only make L. linearis var. Southern forms take it down. the characters made off.
Your Gaura purpurea = G. Drummondii!
G. exaltata = western form of Gaura filipes (B. major, T. & G.)
the others it is better not to publish till we get specimens anew from L.. They would be too apt to turn out Spach's species.

Gaura Lindheimeri, is Spach's G. tripetala from Texas, no doubt. — but besides the tetramerous flowers (semper?) — the fruit & petals are different from Cavanilles original figure.

I doubt greatly your Psoralea Lindheimeri, but am going to compare it with original specimens of Ps. rhombifolia in herb. B. D. Greene. —

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25

Dr. George Engelmann
St. Louis
Missouri

A. Gray
Cambridge
May 17
" 28
June 11

Recd July 17th 1845
Ans July 22d

July 4. Cambridge –

Dear Doctor.

I have waited, before replying to your letter of the 9th June, until the new Post-office law should come into operation, and also until the sets of Lindheimer's plants, daily expected, should arrive. Some time ago I got a bill of lading of box by a New Orleans ship, which I supposed was yours. But two days ago it came, and proved to be something else. How was your box sent? By what ship from New Orleans? I want to see the sets before I send my MS. to the Printer. I want also the continuation of the labels, which you sent me only for the 1st collection. I like the labels very well, except I think them almost too large.

The enclosed sheet I have gradually filled with notes of more or less interest. I will print in the Boston Journal of Natural History; and get a large number of extra copies at small expense. I shall go to press now very soon, as I am just done with College work for the season.

I reduce your Opuntia frutescens to a var. of fragilis and then add all the others in a note on your own authority. I have a small plant of O. A. Cactus Missouriensis and also O. fragilis, which when I asked for the Gardener was unable to find. If we find it, and it proves rightly named, I will send ~~it~~ to you a cutting. Yours sent to me are mostly alive. I could send you several; but I fear not such as would interest you – nearly common gardeners' ones, & perhaps not well named.

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I trust Lindheimer will do wonderfully well this year.

You ask how Drummond's specimens compare with Lindheimer's. The specimens are better made and dried than Drummond's, but, judging from my own set, are not so copiously distributed. But perhaps yours are full enough for the price. There will be no difficulty in the sale, when once in the market, and in considerable quantity.

I hope to receive the sets soon. I leave the rest of the room for Dr. Torrey, who is now with me. — also soon to send you proofs.

Yours truly
A Gray

Cambridge July 5th 1845

My dear Sir –

I am here on a visit at my friend Dr. Gray's & as he was about sending off a letter, I asked him to reserve a corner for me. As you may well suppose, it is a great treat to work side by side with my old fellow laborer once more. He is very comfortably situated, living in a large house attached to the garden. — I was surprised & disappointed at the return of Mr. Halsted. He came to my house at Princeton last week, & spent several days there. I had anticipated some valuable acquisitions to our Botany from his exploration in the far west. Fremont, however, will collect largely. But what a pity he did not take with him a thorough botanical collector! I believe he has in his company a gardener who can make tolerable drawings – but he ought to have taken with him a person whom I recommended who expected to go with him a short time before the expedition started. The report of his last exped. is not yet published but it was finished by the 1st of June. I have a small botanical appendix – but concluded to reserve my account of the whole collection till the 3rd Exped. returned.

I see that you continue to work at Euphorbiaceae, & with much success. I have long been interested in this family & have some notes on them. Klotzsch has anticipated some of my determinations but there is much to do still. I wish you could get a copy of Nuttall's Arkans. pl. from the Am. Philos. trans. Nutt. left some extra copies in Philadelphia – & I will try & get one of them for you from Dr. Pickering. I thank you for the plants sent by Mr. Halsted. The one that interested me most was Udora Canad. with male flowers. I have long searched for these without success – but hope to find them this season. Is it possible that this plant can be indigenous to Germany? In glancing over Koch. Fl. Germ. two or three years ago (I do not possess the work), if I remember correctly, he gives an account of it, as one of the native plants of that country – but no other author notices it as an extra American genus

Geo. Engelmann M.D.
St. Louis,
Missouri

1845
July 4th
" 17th
" 22d
A. Gray
Cambridge
Also Note by
Prof Torrey

I have some plants for you, which I hope to send by an early opportunity – but I have been so constantly occupied with teaching, & in finishing my N. York Flora, that it has been out of my power to make up a large collection for you. It always gives me much pleasure to hear from you, especially to receive your critical notices of plants belonging to some of my favorite families. Believe me ever, cordially yours, John Torrey

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303. E. subleuca, n. sp.? = only a var. of E. marginata. I have the seeds of the cultiv. plant, which are tuberculate. It holds pretty well the right ~~in other~~ to keep as a species.
174. E. bicolor. of Drummond's Texan coll,

Recd Aug 8th
Ans Sept 12th

July 29th 1845

Dear Doctor

The long expected box of the Texan plants has last evening reached me. I have just opened it, and find it all dry and right. I am sorry the numbers fall short so rapidly in the sets after nos. 8 or 9. — But the second gathering of such species will often replace such hiati. The sets for Hooker & his subscribers shall be sent by the ensuing steamer of Friday, free of expense, Hooker having the privilege of receiving such things free by Her Majesty's mail packets.

Helianthus praecox, Monarda aristata — and Brazoria annua — are now in flower, in the Garden. I think of joining your Brazoria and Stachyotum in one genus, distinguished from Physostegia by the bilabiate calyx, becoming enlarged and closed (in much the same mode in both) in fruit. Both are in Drummond's Texan coll. In that case your Brazoria annua must be B. truncata = Physostegia truncata Benth. & the other B. scutellarioides, if you please. I am about to submit them to special examination

I begin to print in a few days, and will send you sheets.

In haste Yours

A Gray

Rec'd Aug 8th

~~Engelmann's coll~~ 1845

Lindheimer's collections this year should be great in [illegible] I promise to aid you in working them up quick. A.G.

1845 A. Gray Cambridge
s. July 29
r. Aug 8
a. September 12

MISSOURI BOTANICAL GEORGE ENGELMANN

Asclepias glaberrima. had best wait till I see it.

Convolvulus lobatus = C. hastatus, Nutt. But that name
being pre-occupied, I have proposed yours in a note.

278. Lithospermum Mandanense is not that which
has a very long tube of the corolla, nor a Batschia, for the
tube is naked & unappendiculate. It resembles L. incisum figured by
Hooker, but that has a very long tube to the corolla. The foliage
most resembles our
Drummond's Texan specimens of that plant
almost exactly the supposed (L. breviflorum). The plant from Brazos
as a new sp. L. angustifolium, which is
near Houston may not be
in Drummond's collection.

Plant Brazos bottom. April, 1842, is distributed = Nemophila
phacelioides. Eutoca (called in
279. Phacelia erectiflora is a good Eutoca strictiflora. n. sp.
Drummond's collection) = restore the
(At present I incline to follow Bentham and restore the
Cosmanthus to Eutoca & Phacelia, or put all in
one genus.) Therefore
280. P. patuliflora = Eutoca patuliflora & 134 Phacelia
maritima.
hirsuta = Eutoca hirsuta.
In former sending is a specimen of Nuttall's Ph. glabra = the
likewise Eutoca glabra * ^ ~~n. sp.~~ Hook.
282. Pentstemon flammeus, n. sp. = P. Murrayanum,
284. Cast. indivisa n. sp. seems to be C. occidentalis, Torr.
285. Hedeoma citriodora n. sp. = H. Drummondii, Benth. too
his is badly described.
288. Your Physostegia ~~intermedia~~ dilatata n. sp = Dracocephalum
intermedium, Nutt.
289. Your Verbena multipartita n. sp. = V. bipinnatifida, Nutt.
292. V. connata = V. perfoliata LeConte, but not really diff.
295. "Rivina laevis" = R. portulacoides. Nutt.

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296. P. cristatum, n. sp. Good.

297. Eriotheca = Eriogonum multiflorum, Benth., who has well described it. It, with some others might make a good genus if it were not for all sort of intermediate species which break down all your characters most completely. I have a very full suite in that genus. There are several perennial species which have the outer sepals larger, and ~~spre~~ even spreading in fruit: there are annual which have it not. ~~Some~~ Perennial species are described with "stigmata crassiuscula", while my Drummond specimens of your Eriotheca, a little older, have stigmata capitata.

299. Aristolochia reticulata, n. sp. = A. reticulata Nutt.

300. Euphorbia parvifolia n. sp. = E. herniarioides, Nutt., who has well described it. (E. oblongifolia not being distributed and no specimens sent. I think I had best pass it for the present. Perhaps Lindheimer will collect it in quantity.)

E. Geyeri I suspect is the E. polygonifolia of Nuttall (+ Hook.?) who has described our coast plant under the name of E. maritima. Perhaps it had better wait a little, till I can see Hooker's western plants in Herb. Torr. If it prove to be the common western one in place of E. polygonifolia, it ought surely to bear Geyer's name.* We will leave this sort for future remark, since your

301. E. gracillima n. sp. is E. arenaria, Nutt. l. c.!

302.

---

* On consideration, I have given it for you in a note.

Recd Sept 5th
Ans Sept 12th

Cambridge Aug. 22

Hendecandra multiflora Torr. = H. Texana. I have now a fragment of Torrey's specimen, and have fully compared them.

The plant near Tournefortia is in Drummond's coll. poor specimen — is unknown. — must be compared with Piptolepis. Nutt. of which I have specimens. Direct Lindheimer's attention to it.

The elm is Ulmus crassifolia, Nutt. Suppl. to Michx. = U. purpurascens, Nutt.

No. 179. Urtica gracilis? H. Kew. Smith, ex char.

Hyptis. [illegible]

Also in Drummond. Habranthus Texanus. Herb.

314. Amaryllis Lindheimeri. =

Acanthaceae. Nees, in Linnaea 1842, has referred our Ruellias to Dipteracanthus, putting down under it Calophanes, Don. He would therefore include Dizygandra. This reduces the genus to some sense. Dipteracanthus was established in Wall. Pl. Ind. Rariores; not in Lindl. Introd. as Endlicher wrongly states.

Your 158 = Dipteracanthus ciliosus, Nees. l. c. also in Drummond.
157 is a new sp. D. (Paniculana) nudiflorus, I mean to keep up the old genus Dianthera
159 & 291 — agrees with gen. char. I find
160. Dicliptera brachiata. often 2 seeds in each cell; but one of them usually imperfect. Nuttall has given a full character

" 290 Meiophanes must also be reduced to Dipteracanthus. Nees has Brazilian & Indian species ~~with~~ a small corolla shorter than the calyx; make a section of it
Dipteracanthus (Meiophanes) micranthus, n. sp.

Anisandra, is a plant we have long known. It is Ruellia justiciaflora, Hook. in Comp. bot. mag. 1. p. 176. N. Ol. Lindheimer & Drummond.

Aug. 22.

It has been distributed by Dr Riddell, some years ago, with lithographed labels as a new gen. Ebertea! — a name we might in courtesy be obliged to adopt, tho' Dr. Eberle does not merit a genus. But there is no necessity for this, as I am confident it is a Hygrophila, and quite accords with the other species of that genus in habit also. I make a note about it. The only thing in the way is that the other species seem all to belong to the Eastern world.

Greene's no. 5. is a specimen of what I had taken for Clematis Pitcheri, but with young fruit, which leaves little doubt it is C. reticulata — I let all pass therefore under no. 5, without comment.

I find not another Ranunculi in Greene's collection.

---

35. Psoralea Lindheimeri. is certainly the plants of Drummond, described as P. rhombifolia, but what will be the other (which I have no specimen of). The plant in Greene's set has most of the peduncles decidedly longer than the leaves. I have seen no fruit: I should like to have fruit.

Eglotes ~~Arkansana~~ Texana — is surely E. Arkansana. I find good styles in the central (infertile) flowers in the plants now blossoming in the garden.

27. Gonolobus parviflorus. I think your remarks about it are well founded. There is a G. parviflorus, however, in DC. Prodr. Suppose we call ours G. cynanchoides. It is also in Drummond's coll.

to us, and
Acalypha monococca
has a wide range. I believe Torrey has mentioned it in his New York report (unpublished as yet.

Lithospermum Mandanense. I have now seen specimen of Hooker's plant — I am right, and Torrey quite wrong. —

Aug. 11. —

I have this moment received Bentham's MSS. of Scroph. It appears to be the American part of that for Prodromus. — very well done.

Our Buchnera, 139 = B. elongata Swartz.

Capraria multifida is referred to Conobea

Gerardia spiciflora = G. maritima β. grandiflora. (But I

141 keep up your name, as Benth. quotes it as a syn.

284. Castilleja indivisa. Engelm. he keeps & describes — though he does not appear to have compared it with C. occidentalis Torr. I copy his character.

Your "Xyris fimbriata. Hale, non Ell. is X. ambigua, Beyrich, I suppose. — I have it from Texas, Wright.

Mamillaria sulcata is now in flower with me. My artist, Mr. Sprague has live plants of M. vivipara, Nutt. which he gathered up the Missouri. He will bring them to me, and I will send you off-shoots.

—

N. B. I send you an offshoot from M. vivipara — It has red flowers —

Yours is a really new species,

I find trouble with Oxybaphus.

Your O. nyctaginea from St. Louis is near that sp. but appears different, perhaps only a variety. I cannot now investigate them thoroughly.

293: I think is only Allionia ovata, Pursh (C. pilosa, Nutt.) – with bad specimens. I have it from Texas, Wright, more hairy than yours.

1845 – A. Gray
Aug 22, 1st
Sept 5
Sept 12
Cambridge

Nuttall [illegible] with ~~Nuttall~~

No. 72. Liatris mucronata DC. The specimen in the set sent
Marked not previously
me is L. mucronata, Torr. & Gr. fl. non DC.
But the specimen previously sent
Brazos, August.
me (marked Sept. (1848) is) ~~[illegible]~~ the real L. mucronata DC.
than in L. tenuifolia and
Prodr. — Heads & flowers rather larger
scales oval, obtuse, abruptly mucronate. — Which of these
is actually distributed in the sets? I have taken for granted
the former — which we will call L. acidota, giving the
diagnoses of the two. (Correct me if wrong, or if both are distributed.)
L. acidota β. vernalis. — [illegible] cylindrostachya.
Then 73 = ~~praecox~~ H. [illegible] praecox in another; I have used the
97. H. vernalis in one place.
latter name, (as you suggest)
111. Egletes Texana. I cannot make diff^t from E. Arkansana.
The other, which is surely
is added in a note.

Cuscuta oxycarpa is added with remarks.
C. compacta, Choisy, also added, [illegible] described by Brown. Lam.
[illegible] are diffuse except
Jamaicensis [illegible] Spec. [illegible] minutifl. [illegible] inundatum Sw.
130. [illegible] corolla as yours [illegible] — 133. [illegible]
with the [illegible] tenuiflorum, Nutt. P. hirsuta, Nutt. (No. 405. S. W. Missouri coll. for 1844. —
134 Phacelia ciliata n. sp. — I will give these remarks in [illegible] Digitalis is white-flowered
the same [illegible] P. cobaea, Nutt. [illegible]
140. "Pentstemon digitalis" [illegible] Girardia [illegible] long [illegible]
I will [illegible] Benth [illegible] (suppose [illegible]
expect full notes on all [illegible] Physostegia truncata, Benth. [illegible] as the best good fruit
The Brazoria = [illegible] a genus of it.
I wonder he did not make [illegible] I am going to examine it now. —
sinuad; [illegible]
nal of flowers.
S. Drummondii, Benth! exactly.
Lindheimeri = [illegible] Drummond's Texan coll. but
143. Scutellaria [illegible] also = in [illegible] S. cardiophylla, n. sp.
new species; [illegible] noticed [illegible] ? [illegible]
Bentham has no where [illegible] You say [illegible] has not arrived.
151. Monarda Lindheimeriana. [illegible] contain it
My part of Walpers which should [illegible] would consider it.
a var. of M. fistulosa, ~~Bentham~~ [illegible]

Your subgen. of Monarda (Pleioneuron) corresponds with ~~Nuttall's~~ Nuttall's subgen. Coryanthus, — which founds it on the bifid or emarginate carinated upper lip of the corolla as long as the stamens. — This includes M. punctata also. Bentham's generic char. is, Calyx 15-nerved, &c. Rafinesque also made the section Cheilyctis long ago, and this ~~Bentham~~ Bentham (in Suppl.) has adopted!

Your Monarda penicillata is exactly M. aristata Nutt., at least the Drummond's Tex. specimens, which alone I have. I suspect your "M. aristata, n. sp." from Arkansas is also Nuttall's!

154 "Verbena macrostachya" = V. strigosa. Hook. comp. to Bot. Mag.
155 " bipinnatifida ~~Nutt.~~" No. But only a var. of V. [illegible]

157 and 160 =

*167 = Eriogonum longifolium, Nutt. Benth. — var. with broader shorter leaves — also collected by Drummond.

168. Polygonella ericoides = Gonopyrum Americanum Fisch. & Meyer, but must be reduced to Polygonella.

171. Croton Lindheimeri can only be a var. of C. (Pilinophytum) capitatum. The stigmas, especially in Drummond's specimens, and also in Lindheimer's are often 14–16. — The seeds as large as in ~~[illegible]~~ my specimens of C. capitatum, in which the lower leaves are toothed in the same mode. — Still I will cite the name obscurely, to secure it.

305. = Hendecandra Texensis, ~~Klotzsch~~. = (256. Drummond) —
= Croton muricatum, Nutt. l.c.!
(Croton maritimum = Hendecandra maritima, Klotzsch.)

175. Aphora mercurialina, ~~Nutt.~~ = Serophyton pilosissimum, Benth. var. [illegible]. But Nuttall's name must stand. The other is [illegible] your S. glabrior? S. Drummondii = our A. Drummondii. A third overlooked by ~~Bentham~~ is in Drum. Tex. —

+ Your Eriotheon is Eriogonum multiflorum, Benth.

185. Hyptis scabra, I have no specimen of this. I must
wait till the sets come - and then compare with H. tota
Smith & H. ambigua Benth. in Kunth.

186. H. angulosa = H. bulbosa, Kunth. clearly.

The whole genus

~~2 spec.; but till the sets will~~

188. Hypoxis leptocarpa is only a variety, I fear. The specimen
you said has some capsules oblong-prismatic, with six good
seeds in a row. - others on the same specimen are as short
as those usually are in H. erecta. Authors (Nuttall) too
describe the capsules of erecta as oblong. I have no doubt that
the ovules in leptocarpa are biseriate.

189 Moræa? = Nemastylis? purpurea, Herbert in Bot. Reg. sub. no.
1779 (1840) - It is also a species of his genus Alophia (loc. cit.) which
name must be adopted. But in naming this and its Texan allies, Herbert
has made much confusion and mistakes.* I will straighten the gen. character,
and the species as far as we are concerned. The common Texan ~~Nutt~~
and Arkansan Nemastylis is N. geminiflora, Nutt. (N. acuta, Barton); but
Nuttall credits also N. cærulea to Arkansas. (~~No~~ It will not do for his
Alophia, after all; the perianth is not unequal enough, the inner series
We will venture a genus, and call it Eustylis.
not N. auriculata, & = E. purpurea.

190. Habenaria auriculata = H. (~~Gymnadenia~~) nivea, ex char.
I will compare.
specimens I cannot say
a new species.
I am afraid of
Spiranthes.

191. Spiranthes = S. heterantha, Nutt.

193. ~~Lond~~ etc. - montis and 199. are
(Your Alliums of Geyer's A. reticulatum, Hook. etc.
A. stellatum and

Dichromena (no number) = D. latifolia var., - the other D. leucocephala

205 = Heleochairs arenicola, Torr. MSS.
206. Scirpus lacustris - has 2-cleft style.
207 Spartina (not laevigata). I have ventured to describe it as a
new sp. S. junciformis. Are all the spec. distributed the
same?
213 Eragr. prostrata = Poa (Eragr.) capitata, Nutt. in trans. Amer. the sub-
masc. plant & 214 (E. radians) = the feminine plant of the same species

The queer grass not numbered from Galveston I have somewhere seen named by Nees from Drummond's specimens. I must find it. If not I will describe it in a note. Torrey and myself have formerly looked at it.

~~217~~ Vesicaria auriculata — near V. Nuttallii. I shall have Torrey's specimens to ~~compare~~ soon.–

Algarobia — Interesting indeed! But there is an approach to it in A. dulcis. You will see my notes upon it soon.

239. Gaura exaltata. I now think a good spec. But it must I think G. longiflora, Spach. I have it growing from the seed! It must new name, G. Pitcheri, Pickering. (cult. as G. biennis β. Torr.) ~~also~~ be *

Cacti; I will copy ~~work out~~ from your notes.

Pterocaulon leptostachyum agrees entirely with P. virgatum DC.! (only he says simple, but Linnaeus describes the stem as bearing many simple branches.)

261. Helianthus asperrimus, n. sp. I must reduce to a mere variety of H. Maximiliani. It is doubtless a stunted form, growing in more arid places.

Asclepias Lindheimeri is very close to A. longicornu which I have,– but distinct. It is in Drummond's Texan coll. My friend Decaisne see and describe it.

Hendecandra multiflora Torr. proves on comparison to be just the Texan plant: the flowers are larger than in some Texan specimens.–

Rec^d. Octob 4^th
Ans Oct 6

Cambridge 23^d Sept, 1845.

My Dear Doctor

To day I send you at length a copy of the Plantæ Lindheimerianæ. You see it has swollen to 56 pages, although I have condensed.

I have got 150 extra copies, which I have to pay extra press work & paper — it amounts to 9½ dollars. I will bear a part of this expense, and will take, I think, the set No. 19 of Pl. Lindh. (=190 species) now in my hands, of one subscriber, [illegible] offers for it, and account with you for the balance.

I hope you will be pleased on the whole with the Pl. Lindh. pamphlet. This year's collection I will have ready to print almost as soon as you send it. The labor will be by no means so great hereafter. Lindheimer must get into Western [illegible] as more inland, I mean. [illegible] by the U. S. Army [illegible] plants [illegible] does not [illegible] the subscribers will [illegible] much Gramineæ & Cyperaceæ; they make [illegible] Lindheimer's collections [illegible] large quantities for sets. [illegible] are so easy to dispose [illegible] the copies you desired I have distributed by mail to N. A. botanists, & shall distribute [illegible] and others to botanists abroad, via Hamburg, especially abroad — also three [illegible] copies to Braun. — [illegible] of Brunn — the [illegible] ask for, through Poppe & Co. —

Hooker writes that he has my letter, but the box containing sets of plants had not yet reached his hands when he wrote.

Recd Octob 4th

Geyer has reached England, with his collections — about 600 species, to be divided into 20 sets — sold at £2 per hundred. Geyer has begun to give a general account of his journey in the Sept. no. of Hooker's Journal of Botany; and Hooker is to follow with an Enumeration & description of the new species. Well, I hope from the proceeds that Geyer means to repay the money you advanced to him. I doubt whether his collections is to prove a very good one. It is necessary I should have it, and I must subscribe, tho' I cannot well afford it. Shall I, or will you tell Hooker you expected Geyer will now repay his pecuniary obligations to you; though he has proved false in every thing else.

Gordon is advertised to go to the Mountains & ~~Tex~~ Santa Fe (when?) next year. I suppose he is not much to be depended upon, however.

I suppose ~~H~~ Greene has not yet paid you. I send him to-morrow a copy of our Enumeration, when he will be reminded of it. I must close — Give me news of Lindheimer — etc

Yours very truly

A. Gray

Spiranthes — I adopt S. vernalis, provisionally, but there is a new one of Nuttall in S. States, — another vernal one in the North, — &c. —

Spartina, The tall plant must also be the new one. I send you some flowers of S. glabra.

Hope the specimen of live Mammillaria vivipara came safe to hand in my last letter. Greene has promised to give me a check for his set of plants when he sees me next, How shall I remit to you? Brazoria truncata & Mammillaria are beautifully figured!

Dr George Engelmann
St. Louis
Missouri

24
MS.

1845
Sept 23 A. Gray
r. Octob 4 Cambridge
a. " 6

Recd Oct. 12th
Ans Dec 7th

Cambridge Oct. 7. 1845.

My Dear Doctor.
By this time you will have in hand
Plantae Lindheimerianae, which I
a copy of the I make to-day a hurried
trust will please you.
visit to New York, and will ~~send you~~ take to Poppe
& Br- the 19 copies for you. One I have given to
Mr. Carey who will send by mail - with the
specimens marked not in set 19 which he has just taken
and which he asks you to try to furnish hereafter.
for his set. I must
Greene has not yet paid ~~me~~
ask him soon, if he does not hand it to me, and
I have no sets on hand,
remit to you.
having forwarded all but no. 19 to England. But
Oakes asks to be put
now, after so long delay, and Curtis writes enquiring if
down for a set. - ~~You~~ had best, therefore,
things can be had.
send me the two best sets that are still on
hand. Now that the specimens begin to be
seen, and I have distributed the pamphlet largely,
they will go off fast. All Lindheimer can collect
hereafter will go as fast as possible -

John Carey, New York }
Wm Oakes Ipswich, Mass. } must go in for
as full sets as possible of all the future distribution
Tell Lindheimer to collect Carices - all Cyperaceae & Grasses

which he seems to have overlooked. They are the easiest of all to make specimens of.

MISSOURI
GEORGE E

I send, by a Hamburgh ship from New York, the parcel of pamphlets to Prof. Alex. Braun— to the care of Röding & Br. Hamburgh— of which please apprize Mr. Braun.

Our friend Mr. Carey has lost his whole herbarium in the great fire in New York last summer. In the midst of his afflictions he had nearly given up the hope of ever forming another; but ~~by the~~ assured by the advice of his friends, who have offered to share their duplicates with him, he has concluded to begin again. He has now been with me a week, selecting duplicates from my herbarium for a commencement. —

Can you aid him in his emergency, by sending duplicates of ~~[illegible]~~ St. Louis and other plants? It will be a real favor if you can.

Your favor of Sept. 13. I will reply to soon, making such remarks as may occur.

I remain Yours ever,

A. Gray.

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MISSOURI
BOTANICAL
GARDEN

New York. Wednesday Morning.

Dear Doctor.

I sent John Carey to Wiley & Putnam for a set of the Geyer Illinois plants, which you know were advertised for sale at $6. per set — in Silliman's Journal. But W. & P. told him they had got orders from you to sell them at $10. — the set. This, under the circumstances of their having been advertised and partly sold at $6. — of course Mr. Carey is not inclined to give. Had you not best send him (or me) an order to deliver a copy at the advertised price?

As to the stock being sent to London, I told Wiley your wish, but they are not sent. — Had you not better write officially to W. & Putnam to send them to Hooker — They will attend to it on a direct order from you —

In haste Yours

A. Gray

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MISSOURI
BOTANICAL
GARDEN

Dr. Geo. Engelmann
St. Louis
Missouri

NEW-YORK
8
OCT
10 cts

A. Gray
Cambridge

1845
d Oct 7
r Oct 18
a Dec 7

Recd Dec 2d
Ans Dec 7

Cambridge 20 Nov. 1845

By the way, I find that the figure of Physostegia truncata, Hook. Bot. Mag. is really taken from our Brazoria scutellarioides!

The copies of Pl. Lindh. I took to New York for you were sent by Wiley & Putnam in a box packed for W. D. Skillman, St. Louis. Bookseller. and I hope have reached you duly.

I have a poor specimen of Polygonum cristatum. collected somewhere West by Dr. Leavenworth.

Herbert thought at first he had two or more Cuscutas, but at length was convinced they were one. I believe only 2 are described. Next year, will take them up, with your notes. Can't say about the little Alisma.

My old sets of Gramineae & Cyperaceae are nowhere at all to be had! I have not a set myself.

Hooker is greatly occupied — (I hear from him seldom now), & has probably forgotten about the Cuscutas — Write him again. He will be glad to loan you his whole set. The Mammillaria I sent you is no doubt M. vivipara.

P.S. Lindh.

Question relating to no. 38 — Yes.

" 196. My Cooperias only one flowered, that escaped me.
But I have plantlets from the seed it ripened.

" 203. Cyperus tetragonus has turned up frequently of late.

" 206. There may likely be several plants blended under
Scirpus lacustris. We will see some day.

The transposition of no 286 & 287 was made by the printer. It is rightly stated on p. 47.

The tubers of Asclepias Lindheimeri you sent last year were dead when they came.

314. Rather doubtful genus.

315. Eleocharis acicularis it was named by Torrey.

I must now break off. Stir up Lindheimer to great activity. I will be ready to study his next envoi right away. I have distributed the copies of the Lindheimer pamphlet very widely both at home & abroad.

Yours ever

A Gray

1845
d Novemb 20
r Dec 2
a Dec 7

A. Gray
Cambridge

Rec'd 2 Dec
Ans Dec 7

Cambridge 20. November, 1845.

A. Gray
Cambridge

1845
Novemb 20
Dec 2
Dec 7

My Dear Doctor.

I owe you many apologies for not having attended to this matter before. Greene paid me for his set of Pl. Lindheimer. 3 weeks ago, but a crowd of other matters, and one or two things that I wanted to settle before I wrote to you have prevented till now. Annexed you have a check on the Merchants Bank of Boston, payable to your order, for $33.63. which I dare say will be readily negotiable at St. Louis.

It is made up of Greene's $25.63, and the set which Carey took $15.07, minus your share of the bill for printing and of the expenses of transmission. I am now sorry I did not retain those sets that went abroad, for I have had some applications, and as many are likely to come in as you can supply. Mr. Oakes, I have already written to you about. I hope you can still make up a good set for him. — An application from Prof. Cleaveland is still pending. Perhaps, as I have written to him in answer to his enquiries, I shall get his determination in time to go in this letter. Mr. Lowell, a gentleman of wealth here, asked me if he could have a set. All these at any rate will be subscribers for the ensuing collection, and will take all in that which have already been distributed in the 1st distribution.

But the point about which I want especially to write is this. As Mr. Lowell expressed a desire to aid in this matter, and as he is a cultivator, keeps a gardener, conservatory, &c — I asked him to eke out our poverty here at the Garden, by joining me in a remittance, and if successful — in offering an annual stipend to Lindheimer for sending us seeds, bulbs, Cacti (especially) tubers, and indeed roots of live herbs & shrubs (Don't forget Algarobia glandulosa!) which with the present & prospective communication between any Texan port and New York or Boston, can be safely & promptly sent. He will do it, and take part of the plants. As soon as Lindheimer will send us something, you may draw on me for $75. If all goes well, I hope hereafter it may be made $100 pr annum. and, if we ever get our Garden funds replenished even more. So, pray set Lindheimer to work. Let him send seeds, bulbs, and, if he be so that there is little expense of land carriage to vessels for New York or Boston, a box of live plants gradually. You point out to him the things most likely to please me. I hope he has made a good collection of dried plants this year. They will now go off promptly. We have broken the ice: so encourage him.

I write in great haste. You will gather my ideas. —

Yours very truly

Asa Gray

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Missouri Botanical Garden

Rec.d – Dec 8th
Ans Jan 3d –

1845 Cambridge – 27 November –

My Dear Doctor

Thus writes Prof. Cleaveland of Bowdoin College, Maine. I now wish I had kept some of the sets you sent; but no doubt they are sure to sell abroad. Do you hear further of Lindheimer? His next coll. will go right off. If he is active and judicious in sending bulbs seeds, & live plants, I have great hopes to be able to do more for him in that way – $100 or so per annum.

Hooker writes – by his son – that he will send the set of Geyer's Oregon coll. I subscribed for, I am going to divide with J. Carey. Thank you for your kind offers in his behalf.

Besides Mr. Carey there – the new Lindheimer subscribers here are

Mr. Oakes
Mr. John A. Lowell
Prof. P. Cleaveland.

Much occupied
Yours ever.

A Gray

Dr. Torrey has received
the plants collected by
Fremont up to Bent's
Fort. — has layed out the
Compositae, Onagraceae &c
to send to me for inspection —
but I have not got them yet.
A. Gr.

A. Gray
Cambridge

1845
d. Nov. 27
re. Dec. 8.
ans. Jan. 3d 1846.

Answd

[illegible]

to Dr A Gray

Maine

Brunswick Nov. 19, 1845

My dear Sir,

You will please consider me a subscriber for Mr Lindheimer's collection of plants made the past season.

I shall also be glad to receive such Nos. of the previous collection, as can be obtained in good order, even if it should be only 50 specimens.

I suppose the plants collected the last season will not be ready for distribution for some time; but, if any should be obtained from the previous collections, I should like to receive them as early as May next, if convenient.

Prof Cleaveland

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BOTANICAL
GARDEN

Recd Dec 22d — 1845
Ans Jan 3d

Cambridge, 11th December —

Dear Doctor

I forward the enclosed, which has just reached me. I have replied to Mr. Durand — who is an excellent fellow and a very zealous botanist — that if you have none of the first set, you will secure to him a good chance in the forthcoming ones. (which I am anxious to see. The ice is broken, and now we can promptly sell all Lindheimer can collect.) Durand certainly never sent his name to me as a subscriber, before.

I trust you got all my former letters, especially that of 21st November, enclosing a check on Merchants Bank Boston for $\$35\frac{63}{100}$ — and promising Lindheimer remittances for live plants, seeds & bulbs. — am very busy.

Stir up Lindheimer and encourage his heart. —

Yours truly

A. Gray

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10

Dr George Engelmann
St. Louis
Missouri